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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/768,412
Filing Date: January 29, 2004
Appellant(s): STEINMETZ ET AL.

Steven R. Ormiston
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9 July 2008 appealing from the Office action mailed 10 April 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained by the brief is substantially correct. A correct statement of the status of the claims is as follows:

The appeal involves claims 1, 3, 7-12, 15-34, and 38-41.

Claims 2, 4-6, 13, 14, and 35-37 have been cancelled.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

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The appellant's statement of the grounds of rejection to be reviewed on appeal is correct for claims 1, 3, 7-12, 15-34, and 38-41 is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 2003/0025773 A1	Koizumi et al.	2-2003
US 2002/0122104 A1	Hatasa et al.	9-2002
US 6116723 A	Childers	9-2000
US 5721576 A	Barinaga	2-1998
US 5631681 A	Klaus et al.	5-1997

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

(9,1). The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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(9,2). Claims 1, 3, 7, 12, 15, 18, 19, 27, 28, 30, 31, 38, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatasa et al. (US 2002/0122104 A1) in view of Klaus et al. (US 5631681 A)

Hatasa et al. discloses the following claim limitations:

As per claim 1: an off-axis printing-fluid reservoir configured to hold a free volume of printing fluid (figure 1, element 1) and air mixed together therein, the printing-fluid reservoir having a substantially planer leading surface (figure 2, element 17); a printing-fluid interface recessed into the leading surface and extending into the reservoir and configured to move printing fluid out of the printing-fluid reservoir (figure 1, element 7 and figures 2 and 3, elements 17 and 17a) and [0109]; and an air interface recessed into the leading surface and extending into the reservoir and configured to move air into the printing-fluid reservoir as the printing fluid is moved out of the reservoir (figure 1, element 9, and figures 2 and 3, elements 17 and 17a) and [0109].

As per claim 3: the leading surface of the printing fluid reservoir is an upright surface configured for lateral insertion into a printing system (figure 1, element 4 is laterally inserted into printhead 3).

As per claims 7, 19, and 39: the printing-fluid interface is configured to laterally output printing fluid (figure 1, element 4 into element 3).

As per claim 12: an off-axis printing fluid reservoir configured to hold a free volume of printing fluid and air mixed together therein (figure 1, element 1), the printing fluid reservoir having a leading surface configured for lateral insertion into a printing system (figure 1, element 4 is laterally inserted into the printhead); a printing fluid

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interface recessed into the leading surface of the printing fluid reservoir and extending into the reservoir (figure 1, element 7 and figure 2, element 17a) wherein the printing fluid interface is configured to output printing fluid from the printing fluid reservoir during a first mode of operation [0109]; and an air interface recessed into the leading surface of the printing fluid reservoir and extending into the reservoir (figure 1, element 9 and figure 2, element 17a), wherein the air interface is configured to regulate pressure within the printing fluid reservoir by inputting air into the printing fluid reservoir during a first mode of operation [0109].

As per claim 15: the leading edge has a substantially planar profile (figures 1 and 2).

As per claim 18: a single structural piece forms the leading surface (figure 2, element 17).

As per claim 27: the printing-fluid interface is configured to receive a fluid connector that is in fluid communication with a printing-fluid ejector upon installation of the printing-fluid container into a printing system (figure 1, element 7).

As per claim 28: the printing-fluid interface is configured to deliver printing fluid to the printing fluid ejector via the fluid connector during the first mode of operation [0109].

As per claim 30: the air interface is configured to receive a fluid connector (figure 1, element 7) that is in fluid communication with a venting assembly (figure 1, element 8) upon installation of the printing fluid container into the printing system.

As per claim 38: storing a free volume of printing fluid and air mixed together in a reservoir (figure 1, element 1) having a printing fluid interface (figure 1, element 7) and

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an air interface (figure 1, element 9), allowing printing fluid to exit the reservoir through the printing fluid interface and allowing air to enter the reservoir through the air interface [0109].

Hatasa et al. does not disclose the following claim limitations:

As per claims 1, 7, 12, 31, 38, and 40: air and printing fluid moving into and out of the reservoir during a first and second mode.

Klaus et al. discloses the following claim limitations:

As per claims 1, 7, 12, 31, 38, and 40: air and printing fluid moving into and out of the reservoir during a first and second mode (figures 2 and 3, column 4, lines 40-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing fluid container taught by Koizumi et al. with the disclosure of Klaus et al. in order to more easily refill the ink tank.

(9,3). Claims 8, 20, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatasa et al. (US 2002/0122104 A1) and Klaus et al. (US 5631681 A), and further in view of Koizumi et al. (US 2003/0025773 A1).

Hatasa et al. discloses the following claim limitations:

The fluid container of claims 1.

Klaus et al. discloses the following claim limitations:

As per claims 8, 20, and 41: air and printing fluid moving into and out of the reservoir during a first and second mode (figures 2 and 3, column 4, lines 40-54).

Hatasa et al. as modified do not disclose the following claim limitations:

As per claims 8, 20, and 41, the air interface configured to laterally input air.

Koizumi et al. discloses the following claim limitations:

As per claims 8, 20, and 41, the air interface configured to laterally input air (figure 1, element 26, there is a lateral portion of the air supply line).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the reservoir and apparatus taught by Hatasa et al. as modified with the disclosure of Koizumi et al. in order to better adjust the printhead pressure. It is also well known in the art to input and output air in a variety locations on the cartridge.

(9,4). Claims 9-11, 26, 29, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatasa et al. (US 2002/0122104 A1) and Klaus et al. (US 5631681 A), and further in view of Barinaga (US 5721576 A).

Hatasa et al. as modified discloses the following claim limitations:

A printing fluid assembly containing an air interface and a printing fluid interface.

Hatasa et al. as modified does not disclose the following claim limitations:

As per claims 9, 10, 26, and 29: a ball and septum assembly.

As per claims 11 and 32: the printing fluid interface and air interface respectively configured to conditionally block input and output of printing fluid and air unless engaged by a fluid container.

Barinaga discloses the following claim limitations:

As per claims 9, 10, 26, and 29: a ball and septum assembly (figure 8, elements 102 and 104).

As per claims 11 and 32: the printing fluid interface and air interface respectively configured to conditionally block input and output of printing fluid and air unless engaged by a fluid container (column 6, lines 4-17).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing fluid assembly taught by Hatasa et al. as modified with the disclosure of Barinaga in order to prevent leaks from the printing fluid container.

(9,5). Claims 16, 17, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatasa et al. (US 2002/0122104 A1) and Klaus et al. (US 5631681 A), and further in view of Childers (US 6116723 A).

Hatasa et al. as modified discloses:

The apparatus of claim 12.

Hatasa et al. as modified does not disclose the following claim limitations:

As per claim 16: the air-interface is above the printing-fluid interface on the leading edge of the printing-fluid reservoir.

As per claim 17: the air-interface is vertically aligned above the printing-fluid interface on the leading edge of the printing fluid reservoir.

As per claim 21: the air-interface is configured to regulate pressure within the printing-fluid reservoir to an operating pressure substantially equivalent to an ambient atmosphere pressure.

As per claim 22: the air-interface is configured to regulate pressure within the printing-fluid reservoir to an operating pressure above an ambient atmosphere pressure.

As per claim 23: the air-interface is configured to regulate pressure within the printing fluid reservoir to an operating pressure below an ambient atmosphere pressure.

As per claim 24: the air-interface actively regulates pressure within the printing-fluid reservoir.

As per claim 25: the air-interface passively regulates pressure within the printing-fluid reservoir.

Childers et al. discloses the following claim limitations:

As per claim 16: the air-interface (figure 1, element 26) is above the printing-fluid interface (figure 1, element 36) on the leading edge of the printing-fluid reservoir.

As per claim 17: the air-interface (figure 1, element 26) is vertically aligned above the printing-fluid interface (figure 1, element 36) on the leading edge of the printing fluid reservoir.

As per claim 21: the air-interface is configured to regulate pressure within the printing-fluid reservoir to an operating pressure substantially equivalent to an ambient atmosphere pressure (column 2, lines 33-43).

As per claim 22: the air-interface is configured to regulate pressure within the printing-fluid reservoir to an operating pressure above an ambient atmosphere pressure (column 4, lines 40-57).

As per claim 23: the air-interface is configured to regulate pressure within the printing fluid reservoir to an operating pressure below an ambient atmosphere pressure (column 4, lines 40-57).

As per claim 24: the air-interface actively regulates pressure within the printing-fluid reservoir (column 2, lines 33-43).

As per claim 25: the air-interface passively regulates pressure within the printing-fluid reservoir (column 4, lines 40-57).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing fluid container taught by Hatasa et al. with the disclosure of Childers et al. in order to provide a higher quality printing apparatus in which the pressure is properly regulated.

(9,6). Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koizumi et al. (US 20030025773) in view of Klaus et al. (US 5631681) and Barinaga (US 5721576).

Koizumi et al. discloses the following claim limitations:

As per claim 33: an off-axis printing fluid reservoir configured to hold a free volume of printing fluid and air mixed together therein (figure 1, element 22); an upright leading surface (the cartridge can be moved to make any surface upright; also, in figure 8, Koizumi discloses an upright leading edge during printing. It is well known to place printing reservoirs on different sides for printing, and this is illustrated in Koizumi's multiple reservoir placings) of the printing fluid reservoir wherein the printing fluid interface is configured to output printing fluid from the printing fluid reservoir during a first mode and a printing fluid interface on the upright leading edge of the printing fluid reservoir wherein the air interface is configured to regulate pressure within the printing

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fluid reservoir by inputting air into the printing fluid reservoir during a first mode; and wherein the container is laterally installed into a printing system (figure 1, element 17 is laterally installed into the printhead) and the first fluid container engages the printing fluid interface and a second fluid container engages the air interface (figure 1, element 29).

As per claim 34: a single structural piece forms the upright leading edge of the printing fluid reservoir (figure 1, element 22)

Koizumi et al. does not disclose the following claim limitations:

A second mode in which the air exits the printing fluid container and fluid enters the printing fluid container and a ball and septum assembly.

Klaus et al. discloses the following claim limitations:

Air and printing fluid moving into and out of the reservoir during a first and second mode (figures 2 and 3, column 4, lines 40-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing fluid container taught by Koizumi et al. with the disclosure of Schefflin in order to more easily refill the ink tank.

Barinaga discloses the following claim limitations:

As per claims 9, 10, 26, and 29: a ball and septum assembly (figure 8, elements 102 and 104).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing fluid assembly taught by Koizumi et al. with the disclosure of Barinaga in order to prevent leaks from the printing fluid container.

(9,7). Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatasa et al. (US 2002/0122104 A1) in view of Klaus et al. (US 5631681 A) and Barinaga (US 5721576 A).

Hatasa et al. discloses the following claim limitations:

As per claim 33: an off-axis printing fluid reservoir configured to hold a free volume of printing fluid and air mixed together therein (figure 1, element 1); an upright leading surface of the printing fluid reservoir wherein the printing fluid interface is configured to output printing fluid from the printing fluid reservoir during a first mode and a printing fluid interface on the upright leading edge of the printing fluid reservoir wherein the air interface is configured to regulate pressure within the printing fluid reservoir by inputting air into the printing fluid reservoir during a first mode [0109]; and wherein the container is laterally installed into a printing system (figure 1, element 4 is laterally installed into the printhead 3) and the first fluid connector engages the printing fluid interface and a second fluid connector engages the air interface (figure 2, element 17 and figure 1, elements 7 and 9).

As per claim 34: a single structural piece forms the upright leading edge of the printing fluid reservoir (figure 2, element 17)

Hatasa et al. does not disclose the following claim limitations:

A second mode in which the air exits the printing fluid container and fluid enters the printing fluid container and a ball and septum assembly.

Klaus et al. discloses the following claim limitations:

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Air and printing fluid moving into and out of the reservoir during a first and second mode (figures 2 and 3, column 4, lines 40-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing fluid container taught by Hatasa et al. with the disclosure of Klaus et al. in order to more easily refill the ink tank.

Barinaga discloses the following claim limitations:

As per claims 9, 10, 26, and 29: a ball and septum assembly (figure 8, elements 102 and 104).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing fluid assembly taught by Hatasa et al. with the disclosure of Barinaga in order to prevent leaks from the printing fluid container.

(9,8). Claims 35-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koizumi et al. (US 20030025773) in view of Klaus et al. (US 5631681)

Koizumi et al. discloses the following claim limitations:

As per claim 35: a printing fluid container comprising: a reservoir means for holding a free volume of printing fluid and air mixed together therein (figure 1, element 22), means for laterally outputting printing fluid from the reservoir during a first mode of operation and inputting air during a first mode of operation [0045].

As per claim 36: means for laterally outputting fluid is vertically aligned below the means for regulating pressure (figure 1, elements 17 and 18 – there are two ways of regulating pressure, the pump, attached to 18 and air input, element 27).

As per claim 37: the means for laterally outputting printing fluid and means for regulating pressure are arranged on a single structural piece (figure 1, elements 24 and 30 and elements 17 and 18).

As per claim 38, a method of supplying printing fluid, comprising: storing a free volume of air and printing fluid mixed together therein (printing fluid and air are in the container together) in a reservoir having an air interface and a printing fluid interface; allowing printing fluid to exit the reservoir through the printing fluid interface and allowing air to enter the reservoir through the air interface during a first mode of operation.

Koizumi et al. does not disclose the following claim limitations:

As per claims 38-41 air and printing fluid moving into and out of the reservoir during a first and second mode.

Klaus et al. discloses the following claim limitations:

As per claims 38- 41 air and printing fluid moving into and out of the reservoir during a first and second mode (figures 2 and 3, column 4, lines 40-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printing fluid container taught by Koizumi et al. with the disclosure of Klaus et al. in order to more easily refill the ink tank.

(10) Response to Argument

**ARGUMENT THAT CLAIMS 1, 3, 7, 12, 15, 18, 19, 27, 28, 30, 31, AND 38-40 ARE
PATENTABLE UNDER 35 U.S.C. 103(a) OVER HATASA IN VIEW OF KLAUS**

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Appellant argues that:

The examiner has failed to make a prima facie case of obviousness as to claims 1, 12, and 38 because Klaus teaches a refill port that is configured as a one way interface - there is no teaching in Klaus that the refill port can move air out of the reservoir.

The examiner asserts that Hatasa teaches a cartridge with an ink port and an air port; in the prior art, air moves into the cartridge as ink moves out of the cartridge. Klaus discloses a container being refilled; as the ink is being injected into the cartridge, air is being moved out of the cartridge. Hatasa is modified with Klaus to give evidence that it is well known in the art that when a cartridge is being refilled, air is displaced. When the cartridge is taken out of the printer assembly, as done during the refilling process for the current invention, the ports in Hatasa could be used to refill the cartridge. There are no other inlets or outlets that would allow other means by which to refill the cartridge. It is also noted that the air port and ink port are functional limitations to the claims; under the rationales of *KSR International Co. v. Teleflex Inc.*, it would have been obvious to one of ordinary skill in the art that the ink and air ports could be used for multiple purposes, such as refilling the cartridge. The process of refilling a cartridge is a known technique in the art that is being done to a known device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hatasa by inverting the cartridge in order to refill it through the available ports.

Appellant also argues that:

"Fig. 1 in Hatasa is a "schematic drawing", and, as such, says nothing at all about the structural configuration of the parts"

The examiner points out that the drawing, regardless of the appellant's assertion that "no apparent effort has been made in Fig. 1 to depict the actual structures or structural interconnection between those parts" *does* depict the cartridge being laterally inserted into the printer system.

Appellant also argues that:

"Liquid supplying tube 4 in Hatasa is not a leading surface of liquid cartridge 2".

The leading surface is an upright surface for lateral insertion into the printing system. The examiner cited the ink tube (element 4) as being laterally inserted into the cartridge 2 and the printhead 3. "Leading surface" has been defined in the independent claims as the surface which holds the ink port and the air port. It is obvious that element 4 is laterally inserted into the ink port, and thus is laterally inserted into the leading surface. The limitation of the leading surface being "upright" is vague. It is not determined whether the leading surface was upright before or after insertion; also, there are two sides of the printing-fluid interface – the inside surface and the outside surface - - one of which will be upright.

Appellant also argues that"

The leading surface is not recessed into the cartridge.

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As discussed above, the leading surface is not element 4, which is inserted into the leading surface, but rather the surface of the cartridge on which the air port and ink port are located. The ink port is clearly recessed into the cartridge, as element 4, through element 7, communicates with the inside of the cartridge and is able to be fluidly connected to both the cartridge and the printhead. The air port is also recessed into the cartridge, as air can move both in and out of the cartridge. The examiner is reading "recessed into" as meaning that the port is opening up into the cartridge.

Applicant also argues that:

The dependant claims are allowable based on allowable independent claims.

The independent claims read on the cited prior art, as discussed above. The rejections of the dependent claims still stand.

ARGUEMENT THAT CLAIMS 8, 20, and 41 ARE PATENTABLE UNDER 35 U.S.C.

103(a) OVER HATASA AND KLAUS, AND FURTHER IN VIEW OF KOIZUMI

Appellant argues that:

Koizumi does not structurally illustrate the lateral insertion of air.

The examiner asserts that in Fig. 4, there is obvious lateral insertion of air 28 into cartridge 22 from pipe 27.

Appellant also argues that:

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The air interface must be recessed into the leading surface of the reservoir and extend into the reservoir.

In Fig. 4, it is shown that the air interface is recessed into the reservoir, as it must be in order for tube 27 to be inserted into the cartridge. The examiner is reading “recessed into” as meaning that the port is opening up into the cartridge.

Applicant also argues that:

The dependant claims are allowable based on allowable independent claims.

The independent claims read on the cited prior art, as discussed above. The rejections of the dependent claims still stand.

ARGUEMENT THAT CLAIMS 9-11, 26, 29, and 32-34 ARE PATENTABLE UNDER 35

U.S.C. 103(a) OVER HATASA AND KLAUS, AND FURTHER IN VIEW OF

BARINAGA

Appellant argues that:

The dual operating mode (air and fluid move both into and out of the cartridge) and upright leading surface with lateral insertion limitations are not taught.

These arguments were addressed above.

Applicant also argues that:

The dependant claims are allowable based on allowable independent claims.

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The independent claims read on the cited prior art, as discussed above. The rejections of the dependent claims still stand.

ARGUEMENT THAT CLAIMS 16, 17, and 21-25 ARE PATENTABLE UNDER 35

U.S.C. 103(a) OVER HATASA AND KLAUS, AND FURTHER IN VIEW OF CHILDERS

Applicant also argues that:

The dependant claims are allowable based on allowable independent claims.

The independent claims read on the cited prior art, as discussed above. The rejections of the dependent claims still stand.

ARGUEMENT THAT CLAIMS 33 and 34 ARE PATENTABLE UNDER 35 U.S.C.

103(a) OVER KOIZUMI IN VIEW OF KLAUSE AND BARINAGA

Appellant argues that:

The examiner has failed to make a prima facie case of obviousness because Klaus teaches a refill port that is configured as a one way interface - there is no teaching in Klaus that the refill port can move air out of the reservoir.

The examiner asserts that Koizumi teaches a cartridge with an ink port and an air port; in the prior art, air moves into the cartridge as ink moves out of the cartridge. Klaus discloses a container being refilled; as the ink is being injected into the cartridge, air is being moved out of the cartridge. Koizumi is modified with Klaus to give evidence that it is well known in the art that when a cartridge is being refilled, air is displaced. When the cartridge is taken out of the printer assembly, as done during the refilling

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process for the current invention, the ports in Koizumi could be used to refill the cartridge. There are no other inlets or outlets that would allow other means by which to refill the cartridge. It is also noted that the air port and ink port are functional limitations to the claims; under the rationales of *KSR International Co. v. Teleflex Inc.*, it would have been obvious to one of ordinary skill in the art that the ink and air ports could be used for multiple purposes, such as refilling the cartridge. The process of refilling a cartridge is a known technique in the art that is being done to a known device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Koizumi by inverting the cartridge in order to refill it through the available ports.

Appellant also argues that:

The schematic drawing in Koizumi does not disclose an upright leading surface with lateral insertion

The examiner points out that the drawing, regardless of the appellant's assertion that although "no apparent effort has been made... to depict the actual structures or structural interconnection between those parts," Fig. 4 *does* depict the cartridge being laterally inserted into the printer system.

The cartridge 22 in figure 4 is laterally inserted into the printing system, as illustrated. The leading surface, is the surface with the air port and ink port. The limitation of the leading surface being "upright" is vague. It is not determined whether the leading surface was upright before or after insertion; also, there are two sides of the

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printing-fluid interface – the inside surface and the outside surface -- one of which will be upright.

Appellant also argues that”

The leading surface is not recessed into the cartridge.

As discussed above, the leading surface is the surface of the cartridge on which the air port and ink port are located. The ink port is clearly recessed into the cartridge. The air port is also recessed into the cartridge, as air can move both in and out of the cartridge. The examiner is reading “recessed into” as meaning that the port is opening up into the cartridge.

ARGUEMENT THAT CLAIMS 38-41 ARE PATENTABLE UNDER 35 U.S.C. 103(a)
OVER KOIZUMI IN VIEW OF KLAUSE

Appellant argues that:

The examiner has failed to make a prima facie case of obviousness because Klaus teaches a refill port that is configured as a one way interface - there is no teaching in Klaus that the refill port can move air out of the reservoir.

The examiner asserts that Koizumi teaches a cartridge with an ink port and an air port; in the prior art, air moves into the cartridge as ink moves out of the cartridge. Klaus discloses a container being refilled; as the ink is being injected into the cartridge, air is being moved out of the cartridge. Koizumi is modified with Klaus to give evidence

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that it is well known in the art that when a cartridge is being refilled, air is displaced. When the cartridge is taken out of the printer assembly, as done during the refilling process for the current invention, the ports in Koizumi could be used to refill the cartridge. There are no other inlets or outlets that would allow other means by which to refill the cartridge. It is also noted that the air port and ink port are functional limitations to the claims; under the rationales of *KSR International Co. v. Teleflex Inc.*, it would have been obvious to one of ordinary skill in the art that the ink and air ports could be used for multiple purposes, such as refilling the cartridge. The process of refilling a cartridge is a known technique in the art that is being done to a known device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Koizumi by inverting the cartridge in order to refill it through the available ports.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Laura E. Martin
/L. E. M./
Examiner, Art Unit 2853

/STEPHEN D. MEIER/
Supervisory Patent Examiner, Art Unit 2853

Drew A. Dunn
/D. A. D./
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